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PROGRESS REPORT

ON

FOREST ADMINISTRATION

IN THE

JAMMU & KASHMIR STATE

FOR THE

*Fasli Year 1990—91, ending 30th. Assuj 1991.
(16th. October 1934.)*



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Photo by P. C. Gupta

Baltal, Sindh Valley, Kashmir

**PROGRESS REPORT
ON THE
FOREST ADMINISTRATION
IN
JAMMU & KASHMIR**
**For the Fasli Year 1930-31, ending 30th Assuj, 1931,
(16th October 1934).**

CHAPTER I—GENERAL.

1. The year that closed has been remarkable for extreme drought which has seldom been experienced in Kashmir before. There were practically no rains in the first quarter of the year in Kashmir while there were light rains in the month of Sawan in the lower hills of the Jammu Circle especially in Udhampur side. The autumn was very dry. In the winter months most of the Kashmir Valley remained almost without snowfall while snowfall occurred only once on the hill tops followed by light showers in the Jammu Circle. Consequently the forests and passes were clear of snow much earlier than usual. In Kashmir the spring was very wet and cold with several falls of snow in April. There were no floods owing to abnormal cold and mahaning operations on the whole were not successful.

2. The result of this unprecedented drought has been enormous damage to seedlings and transplants in almost all the divisions. More especially in the Ramban Forest Division of the Jammu Circle.

3. Floating operations that failed in the spring could

not be carried out in summer either, as most of the nullahs were dry in Bhadun when there is usually plenty of water. There were absolutely no floods in the Chenab river during the rainy season with the result that a very little quantity of unmarked chhanda timber was collected.

4. Fortunately there were not so many incendiary fires as in the previous year except in Udhampur where the months of Baisakh, Jeth and Har were exceptionally dry and hot. The result was that there were some heavy fires which were however quickly brought under control. Thirteen resin coupes were burnt inspite of the vigilance of the staff and the alertness of the tappers. The work in these coupes had to be closed.

5. Never-the-less the period under report was quite favourable for the resin industry. The exudation was abundant and the tappers worked zealously with the obvious result that the required quantity of resin was collected before the close of the year and further tapping had to be stopped.

6. Owing to scanty snowfall in Kashmir, lateness in spring rains and the scarcity of water, some *shali* areas throughout the valley, to a varying extent were left uncultivated and in some cases such areas were utilized for cultivation under *Khushki* crops. Rains came eventually, though late, and in the southern Wazarat particularly, were in time to save large areas. Kulgam and Anantnag Tehsils are the most important

shali producing Tehsils. The damage by drought to *shali* crop in the former Tehsil was negligible while in the latter Tehsil it was practically nil.

7. The yield and quality of the crop, where grown, were very good; there was very little damage from 'Rye'. The rice content of the crop was better than usual.

The maize crop for the year under report was poor owing to lack of rains.

Wheat barley and other *Khushki* crops are reported to have suffered considerably owing to the scarcity of snow and rains.

8. The rates for food grains were below normal throughout which may be attributed to the general economic depression and also to the fact that the stocks were ample.

9. In Kashmir Province there was no epidemic during the year excepting in the Sindh Forest Division where a few cases of small-pox and influenza were reported. Jhelum Division reported malignant malaria in the last quarter of the year. Malaria was not so virulent in Jammu Province as in the previous year, but the plague raged for a while in the Jammu town and its suburbs, and Government took early steps for its eradication.

10. The timber market was not so dull as in the last year and there were hopeful signs of recovery at the close of the year.

CHAPTER II.

11. The Forest Department remained under the Hon'ble Revenue Minister, Mr. V. N. Mehta, I.C.S. throughout the year under report.

12. Sir Peter H. Clutterbuck held charge of the Forest Department throughout the year under report with the exception of from 2nd Magh to 3rd Phagan when he remained on privilege leave. Mr. Hoon, Conservator of Forests, Kashmir, held charge during his absence in addition to his own duties.

The Circle charges were held as follows:-

- i. Kashmir Circle by Mr. T.C. Hoon, Conservator of Forests, throughout the year.
- ii. Jammu Circle by Pt. S. N. Kaul from 1st Katik 1990 to 7th Har 1991, on which date he proceeded on two months privilege leave preparatory to retirement after handing over charge of the Circle to Th. Haqiqat Singh Jamwal who remained in charge of the Circle during the remainder of the year.
- iii. Mr. B. N. Zutshi was appointed as officiating Assistant Conservator of Forests in the above leave arrangement and was appointed as Assistant Conservator of Forests on probation for one year with effect from 7th Bhadun 1991.

13. The Forest Ranger Class at Dehra Dun and the

Forester Class at Chatterrar both remained closed during the year.

14. The following officials retired on pension during the year:-

One Conservator of Forests and one head clerk.

15. The following casualties took place during the year:-

One forest ranger, four forest guards, one head clerk and two clerks.

16. The following divisions were inspected by the Conservator of Forests, Jammu, during the year under report:-

1. Ramban, 2. Kishtwar, 3. Bhadarwah, 4. Billawar,
5. Mirpur.

17. The Local Audit Party inspected the following offices:-

Keran Division, Keran Range, Sharda Range, Kashmir Division and Verinag Range.

No serious irregularity has been reported.

18. Judicial work is reported to have been increasing in connection with kuth and game protection in almost all the divisions concerned and owing to financial stringency the work is being carried out without any increase of staff.

CHAPTER III.

19. There has been no alteration in the total area of forests except the addition of 333 acres of Shankerachariya park in the Pir Panjal Division in Kashmir Circle and thus the total area administered by the Forest Department at the close of the year under report amounted to 10119.84 sq. miles as detailed below:—

i.	Demarcated forests	9951.25	sq. miles
ii.	Partially demarcated forests	34.10	„
iii.	Undemarcated forests	134.49	„
Grand total			10119.84 sq. miles

as compared with 10119.32 sq. miles in the previous year.

20. Besides the above scrub forests consisting of an area of 2396 acres opposite the Amar Mahal palace, Jammu on the left bank of the Tawi river was transferred to the Forest Department for reafforestation. As the demarcation files have not yet been transferred from the Revenue Department so the area in question could not be included in the total area of the circle.

21. No demarcation was done during the year under report in either of Jammu and Kashmir Circle. The demarcation of Thru forest was not completed during the year. The three forests demarcated last year still require the joint inspection by the Wazir Wazarat and the Divisional Forest Officer.

22. The new Astore Range is awaiting demarcation. The service of a special Naib Tehsildar is required for this purpose.

23. The total length of the boundaries completely or partially demarcated remained unaltered viz. 33624.54 miles and the expenditure incurred under this head on repairs to pillars amounted to Rs. 1235/15/6 as compared with Rs. 1618/- in the previous year.

24. No new survey work was done during the year under report except checking of various demarcation lines on which Rs. 38/- were spent as compared with Rs. 53/- spent in the last year.

25. The total amount spent on the constitution of State forests during the year was Rs. 1273/15/6 as compared with Rs. 1671/- in the previous year.

Expenditure on Constitution.

CHAPTER IV. WORKING PLANS.

26. The position as regards working plans continues to be eminently satisfactory. Working **The present position.** Plans on modern lines have been prepared for all the commercial forests of any importance. The problem of revision of important deodar working plans most of which expire within the next three years, has been successfully tackled. There are six working plans under revision at this time and it is expected that the work will be completed satisfactorily and in time. On a former occasion ten years ago, this very work was carried out with the aid of three lent officers from British India.

27. The arrangements regarding the execution and control of working plan work remained the same as before. Working **Progress of the year.** Plan Divisions continued to function under the territorial Conservators, while the control and administration regarding the work was exercised by the Chief Conservator of Forests through the Working Plans Branch now renamed as the Working Plan Control Division. The Jammu and Pir Panjal Working Plan Divisions were closed down on 15th Jeth and 15th Har 1991 respectively, and in their places Muzaffarabad and Kamraj Working Plan Divisions, were opened. As the number of working plans

to be revised was very large, the Divisional Forest Officers Ramban and Keran Divisions were also put in charge of revision of working plans for their respective divisions in addition to their own duties.

28. To exercise close supervision of working plan operations, the Conservator of Forests, Kashmir Circle, under whose control five of the working plans are being revised, has been granted an additional remuneration of Rs 150/- per mensem. But for a large forest estate covering about 10,120 sq. miles, it is better if the control of working plan work and supervision of field operations are entrusted to a single officer, therefore, the Government will be well advised to have a Working Plans Circle, as soon as circumstances permit.

29. The following statement summarises the progress of working plan work for the period under report:-

1. Plans sanctioned.	i. Bhadarwah. ii. Lolab.
2. Plans and maps distributed.	i. Bhadarwah. ii. Lolab. iii. Langet Kuth.
3. Plans awaiting Government sanction.	Nil.
4. Plans and maps printed.	i. Bhadarwah Working Plan and maps. ii. Lolab Working Plan.
5. Plans and maps with the Press.	i. Gurez Kuth W. P. map. ii. Jhelum Valley Kuth W.P.

6. Plans under preparation.

- i. Dudoo.
- ii. Billawar.
- iii. Muzaffarabad.
- iv. Kamraj.
- v. Langet.
- vi. Buniyar.
- vii. Keran.
- viii. Ramban.

7. Plans pending with the W. P. Control Division.

- i. High Level forests of Mirpur and Reasi Divisions.
- ii. Lower Chenab Chir.
- iii. Gurez Kuth.
- iv. Udhampur resin tapping scheme.
- v. Pir Panjal.

30. The work carried out by each party during the year is as follows:—

Jammu and Muzaffarabad Working Plan Divisions :

i. Pandit Shridhar Dhar, Deputy Conservator of Forests remained in charge of the division till Jeth 1991, when he was relieved by L. Faqir Chand Gupta, Assistant Conservator of Forests, who remained in charge of the division till the end of the period. During the winter of 1990 field work of the Billawar Plan was completed. During the summer of 1991 stock-mapping of and enumeration in a part of the Muzaffarabad Division were carried out.

Pir Panjal and Kamraj Working Plan Divisions :

ii. Pandit Ramlal Khajuria continued to hold charge

of the division throughout the year. The field work and the compilation of the Pir Panjal Working Plan was completed during the winter of 1990 and a part of the summer of 1991. Stock-mapping of and enumeration in a part of the Kamraj Division, were also carried out.

Sindh Division :

iii. Pandit Dina Nath Kaul Assistant Conservator of Forests compiled the Gurez and Astore Kuth Working Plan during the winter of 1990.

Jhelum Valley Division :

iv. Mr. R. N. Malhotra, Assistant Conservator of Forests attached to the Jhelum Valley Division was given the charge of revision of the Buniyar Plan. A large part of the file work was completed during the summer of 1991.

Keran Division :

v. The revision of the Keran Working Plan was taken up by Th. Haqiqat Singh Jamwal, Deputy Conservator of Forests in Baisakh 1991. In Jeth 1991 he was relieved by Pandit Shri Dhar Dhar who continued to hold charge throughout the remaining period. The enumeration and stock mapping of a part of the area were carried out.

Ramban Division :

vi. In Baisakh 1991 Bh. Sher Singh, Divisional Forest Officer, Ramban, undertook the revision of the Ramban plan in addition to his own duties. Stock-mapping and the enumeration work was started in the division.

31. The revision of Haran Plantation and Sensa **Future works.** Working Plan will be taken up in the winter of 1991. In addition, the work

in hand the revision of the Kishtwar, Reasi, and Batote-Lander working plans will also be taken up during the next three years. From the last ten years working under the Uniform system it has been observed that the yield was over calculated through various causes, one of which was, only a partial enumeration of the growing stock. In order to arrive at a safe yield, complete enumeration of the entire commercial growing stock will be carried out.

32. As a large number of working plans were prepared during 1982-83, the work of revision is very heavy at this time. To remove a similar concentration of work in future, a regular programme distributing the work evenly, has been prepared. According to this programme for the revision of working plans, three working plan parties will be sufficient to carry out the work.

33. In order to stabilise the market, the forests are still being worked on a restricted **Control**. yield. In addition the work in the Selection Working Circle of, Ramban and Bhadarwah Plans, has been suspended. A small amount of fir is being worked to meet the local demand only. Very little fir timber is being exported.

34. Thinning operations continue to be suspended except in the Lolab, Kamraj, Buniyar and Kashmir Divisions.

35. The position regarding control forms is satisfactory. As regards the compartment histories, the position has slightly improved.

CHAPTER V. SILVICULTURE.

36. During the year under report, the conditions for natural regeneration of conifers continued to be very adverse. Deodar and kail produced very little seed, though kail produced moderate seed in parts as usual, and, therefore there was very little addition to the existing stock. On account of the severe protracted drought that lasted throughout the summer, not only nearly all the seedlings that germinated this year, disappeared but also there was a heavy mortality in the last years seedlings as well.

37. The problem of regenerating P. B. I. areas worked over, is becoming more acute every year. It is very encouraging that the staff has started taking more interest in regeneration works. Inspite of adverse conditions, a large quantity of seed was collected in Ramban and Udhampur Divisions. But it will require gigantic efforts on the part of the staff to restock these areas. Meanwhile allotment of areas containing an abundance of advance growth with scattered overwood for working, is producing magnificent results. As for instance, areas recently worked under the revised Bhadarwah plan will in time to come, form ideal uniform forests.

38. The fir regeneration is deficient as usual, but as working of fir forests is almost negligible, the problem of regenerating them, has not assumed importance.

39. The reproduction of bamboos by culms in Jasrota forests was satisfactory though it was not as good as during the last year.

40. The collection and burning of debris, the most **Measures for aiding regeneration.** important operation for aiding regeneration, has received proper attention in almost all the divisions where forests are being worked under the Uniform System. In areas worked under the Selection System where the disposal of debris is as necessary as in the former areas, this operation seems to have been neglected. A start is reported to have been made in the Keran Division.

41. Other operations such as fencing, preparation of soil etc, were carried out wherever necessary.

42. The most important operations under this head **Tending operations.** are thinnings and cleanings. On account of depression in the timber market, thinnings have been suspended all over the State, except in Lolab and Kamraj forests where they have been leased out along with the major coupes, and Haran and Ningli plantations. In addition to the above a few thinning coupes were sold in Buniyar forests and Sindh and Kashmir Divisions. It has been observed that thinnings as they have been carried out in the Sindh and Kamraj Divisions, have done a considerable harm rather than good to the forests. Saplings and poles under 12" in diameter that stood in need of this operation, have not been thinned where as older trees reaching maturity that should have been left to form



Photo by H. S. Pathania

Kaili crop after thinning



Photo by P. C. Gupta

Established advance growth with sparse overwood ready for final felling

part of the future crop have been removed. Under the current plans, yield from intermediate P. Bs has not been prescribed, and therefore, no check can be exercised on the volume marked under thinnings. In the revised working plans, this difficulty has been overcome by prescribing yield from intermediate P. Bs as well.

43. In Ramban Division a considerable amount of useful work was done in cleaning and thinning the crop below 12" diameter, but as felled poles were left lying on the spot at several places, fires that passed through these areas subsequently, did a considerable damage to the standing crop. These operations, therefore, have also been suspended.

44. Weeding, cleaning, girdling of broad-leaved trees suppressing the advance growth and such other operations were carried out at several places.

45. To restock the obstinate areas where regeneration fellings have been carried out and natural regeneration has failed to come up, a considerable amount of sowing and planting was carried out in most of the divisions. In Langet Division alone about two lacs of seedlings were transplanted.

Artificial Regeneration. 46. In Haran and Ningli plantations, about 12 lacs of willow cuttings were planted up in areas worked over and elsewhere.

47. In Shankaracharya park the result of sowing and planting is not yet encouraging owing to drought but seedlings that have survived the drought, may be considered as established.

48. Simbal and Malikpur Rakhs are being planted up with valuable species according to a definite scheme. It is expected that the whole area will be sown or planted up within a few years.

49. Bahu rakh, which His Highness the Maharaja Bahadur has been pleased to command, should be covered up with vegetation, was handed over to the Forest Department very late this year, and only in part. It is reported that about 27,000 seedlings of various species have been planted up and 15 maunds of seed of various species have been sown in about 7,50,000 pits all over the area.

50. Sinthan nursery in the Ramban Division was further extended and about 3,75,000 kuth seedlings were transplanted.

51. Digitalis nursery at Singhpura is in a flourishing condition. Poshkar (*Inula racemosa*) has also been tried in this area and is expected to give good results.

52. Th. Harnam Singh Pathania, D.C.F. continued to hold charge of the division throughout the year. 17 new sample plots were laid down in various divisions in both the circles making a total of 96 sample plots.

53. Volume tables for kail by height diameter classes have been compiled and have been used in the revised Pir Panjal Working Plan. Data for volume tables is being collected for other species as well.

CHAPTER VI.

PROTECTION.

54. The total number of new cases during the year were 5,833 as compared with 5,978 in **Offences.** the previous year out of these 556 were taken to the court which, added to 216 cases pending with the court at the beginning of the year, made a total of 772 cases as compared with 589 of the previous year. Out of the above the court disposed of 453 leaving 319 cases pending at the end of the year.

55. Of 453 cases disposed of 376 resulted in conviction giving a percentage of 83 as compared with 56 of the last year.

56. The percentage of convictions obtained in each division is noted in the following :-

Kashmir	{ 100,	Keran 97,	Muzaffarabad	{ 96,
Pir Panjal			Kishtwar	
Billawar				
Langet 90,	Jhelum Valley 86,	Kamraj 83,		
Reasi 82,	Sindh 73,	Ramban 70,	Mirpur 68,	
Udhampur 60,	Bhadarwah 43,	Jhelum 0.		

57. Four thousand three hundred and seventysix cases involving 6,035 persons were dealt with by the Forest Department during the year out of which 714 cases with 914 persons were acquitted while the remaining 3,662 cases with 5,121 persons were settled on com-

pensation as compared with 4,108 cases involving 5,499 persons in the previous year. Rs.15,466/-/- were realized as compensation averaging 4/3/7 per case and 3/-/4 per person as compared with 4/15/9 per case and 3/11/7 per person during the previous year.

58. The total number of fire cases which occurred during the year under report amounted **Protection from fire.** to 433 viz., 327 in Jammu Circle and 106 in Kashmir Circle. In all an area amounting to 4,216 acres was burnt. The total expenditure incurred under this head was Rs.1,388/-.

59. The insurance policy for Rs.3,25,000/- for the kuth godown at Baramula was renewed with effect from 8th October, 1934, for another year. The premium paid was Rs.1,035/15/-.

60. The workshop and timber godown at Baramula are not insured. A fire pump, however, is maintained at a monthly expenditure of Rs. 7/8/- and besides Forest Guards are made to patrol by turns in day and night time.

61. Out of the total area of the demarcated forests which amounted to 9951.25 sq. miles **Protection from cattle.** at the close of the year under report, 148.61 sq. miles were closed to grazing under rules, say 1.50 of the total area.

62. Two cattle-pounds maintained in Pir Panjal Division continued to tackle unauthorized grazing. In

this division monkeys destroyed much seed of Kail and Fir. Damage by black bears continued as in the past. The Bakarwals with their goats and sheep continued to do increasing damage in forests and kuth areas. This increase in damage is due to the steadily increasing number of goats owing to the decrease in the rates of grazing fees.

63. Haran plantation is still suffering from the attack of the defoliating caterpillars.

Other injuries. The protective measures as reported last year were continued.

64. In Bhadarwah Division heavy snow-falls continued for days and caused considerable damage to pole crops.

65. *A. minutissimum* and *T. pini* are reported to be prevalent in many Kail areas. In compartments 7 and 8 all Kail trees infected were cut and removed to safeguard the future crop.

66. In Billawar Division lac was attacked by predators as usual. In Ramban the Parasite *Arceuthobium* is common in many forests. The Divisional Forest Officer, Ramban, reported that langurs and monkeys do considerable damage to coupes sown with Deodar and Kail seed. Damage by black bears is increasing. Necessary measures are being taken to issue free licenses to zamindars for shooting black bears wherever they are proved to be causing excessive damage in villages.

67. The forest control over the game preservation and sanctuaries has brought about substantial improvement in all divisions in enforcing protection and checking past illegalities. The Divisional Forest Officer, Kashmir, paid his particular attention to the Achhabal Rakh and Desu sanctuary.

68. There is still a good deal of poaching especially in the higher grazing areas where Gujars and Bakarwals are difficult to control. Many of them have guns but it is doubtful if they have licenses. This matter is now under consideration.

69. All Divisional Forest Officers are already invested with first class magisterial powers under the Game Laws Notification.

70. In Kashmir Circle kuth protection was eminently successful during the year. The **Kuth protection.** Divisional Forest Officer, Muzaffarabad, remained alert and introduced effective measures for checking leakage of kuth. In Keran the success achieved surpassed all previous records. The result of the season's activities was that 40 cases were apprehended. 127 smugglers were captured. Out of these 26 were local people and 101 foreigners. The trials resulted in 95 convictions and 15 acquittals. One accused died in custody as a result of shotgun wound on account of the firing that had to be done by the capturing party in self-defence and 16 culprits are still in the lock-up



Cleaning kuth



Photos by P. C. Gupta

Digitals Nursery

at Keran undergoing their trial. In all 67 maunds 27 seers of kuth was seized.

71. In Jammu Circle kuth protection was also carried out successfully. The staff has gained sufficient experience in watching the movements of kuth smugglers and hardly any smuggling party is now allowed to escape scot-free.

CHAPTER VII. FOREST ENGINEERING.

72. Thirtyseven miles of new roads were constructed during the year at a cost of **Rs. 2,890/-** averaging **Rs. 78/-** per mile as compared with 21 miles in the last year costing **Rs. 2,070/-** and averaging **Rs. 99/-** per mile.

73. During the year 1,576 miles of roads and 45 bridges were repaired at the cost of **Rs. 44,242/-/-** as compared with 1,383 miles of roads and 113 bridges at the total cost of **Rs. 40,286/-** in the previous year.

74. The total expenditure under A. VII. a. amounted to **Rs. 47,132/-** against **Rs. 43,954/-** in the last year.

75. Besides the above 6 miles of working plan path were constructed in the Lolab at a cost of **Rs. 255/-**. This expenditure is debitible to A. VIII. d.

76. No new building was constructed during the year for want of funds. Material worth **Rs. 7,690/-** was purchased for the reconstruction of the embankment wall to protect the divisional office and other buildings at Jhelum. Also **Rs. 499/-** were charged in 1990-91 in connection with the construction of the new Pahlgam rest house. Moreover **Rs. 500/-** were spent for the extension of the sifting shed at Yarkhah in the Utilization Division. This expenditure is debitible to A. I. e.

77. **Repairs to buildings.** Rs. 25,366/- were spent on the repairs to the existing buildings. The total expenditure under A. VII. b. amounted to Rs. 25,865/- as compared with Rs. 19,271/- in the last year.

78. **Miscellaneous works.** Rs. 9,431/- were spent on miscellaneous works such as erection of and repairs to fences, digging of wells, the pay of rest house chaukidars and upkeep of office compounds.

79. In addition to the above the maintenance of telephone in the divisional office at Jhelum cost Rs. 175/- as in the previous years. The telephone line from Chechian to Owen was repaired at a cost of Rs. 100/-.

80. For replacing the old and unserviceable wire, 10600' of steel flexible wire rope was purchased at the cost of Rs.5,300/- and the maintenance charges of the boom, exclusive of establishment charges amounted to Rs.2,775/-. This includes Rs.889/- spent on the improvement of the bund at Bela Bahadur Shah. The total expenditure under this head (A.VII.c) amounted to Rs.17,781/-.

81. The boom yielded an income of Rs.15,024/- during the year under report.

CHAPTER VIII.
EXPLOITATION AND
COMMERCIAL DEVELOPMENT.

I. Major Produce.

82. During the year under report there has been no change in the method and agency of working. All the important forests were, as usual worked under either the uniform or selection system of management and are sold to timber traders under three years leases.

83. All the fellings conducted during the year were in accordance with the provisions of the sanctioned Working Plans and the prescriptions thereof were strictly adhered to. Owing to the continued depression in the timber market certain areas of major fellings as well as thinning coupes were held in abeyance to check the fall in prices.

84. In Kashmir Circle minor forest products, as usual, were extracted departmentally and delivered at the Baramula godown for disposal. Unimportant products such as Banafsha, Zera etc. were leased out on lump sum royalties. In Jammu Circle resin operations continued in the Udhampur Division departmentally under the light continuous method of tapping.

85. Extraction of gum was started in Reasi Division and propagation of lac continued in Billawar Division departmentally. Other products such as Banafsha, Guchhian, Rasaunt were sold on the same lines as in the past, viz., on lump sum royalty.

86. The total quantity of timber extracted by the State agency during the year under **Extraction by departmental agency** report amounted to 2,96,190 cft. representing 1.27 per cent of the total outturn of timber (excluding timber given to concessionists and free grantees) as compared with 1,99,962 cft. representing 1.09 per cent of the total timber outturn in the previous year.

87. The total quantity of firewood extracted departmentally during the year under report **(b) Firewood.** was 6,23,231 cft. representing 45.8 per cent of the total outturn of firewood (excluding firewood removed by the concessionists and free grantees) as compared with 9,21,196 cft. representing 59.39 per cent of the total outturn of firewood in the previous year.

88. As stated in the last year's report no retail sale depot of firewood was maintained during **Srinagar fuel supply.** the year under report in Srinagar town as the public felt no inconvenience regarding the purchase of firewood from private firewood depots. The selling rates remained moderate as in the past year. However, to meet emergencies 95,025 cft. of firewood was purchased from Messrs. Milkhi Ram Jagan Nath for the last time in accordance with their agreement.

89. The following timber and firewood was collected from chhandas on Jhelum, Chenab, Ravi and Ujh rivers:-

River operations.
Timber 61,708 cft. and
Firewood 11,083 cft.

90. The revenue realized from the sale of drift timber amounted to Rs. 38,334/- as compared with Rs. 30,254/- in the previous year.

91. The stock of timber in sale depots at the close of the year was 1,36,144 cft. compared with 1,31,293 cft. at the beginning of the year while the figures of firewood decreased from 2,45,401 cft. at the beginning of the year to 2,14,116 cft. at the close of the year.

92. Owing to departmental felling works having been stopped there are now no regular sales of timber in Jhelum depot and therefore the average rates of logs and scantlings which were being detailed in the previous years reports have been omitted in this report.

93. The total quantity of timber extracted by purchasers during the year under report **Extraction by private agency.** was 1,50,46,675 cft. representing 98.07 per cent of the total outturn as compared with 1,79,96,456 cft. representing 84.22 per cent during the previous year. The above total outturn does not include the timber given to concessionists and free grantees.

94. The total quantity of firewood extracted by purchasers during the year under report **(b) Firewood.** was 7,37,657 cft. or 44.41 per cent of the total firewood outturn (excluding firewood given to concessionists and free grantees) as compared with 6,29,849 cft. or 40.62 per cent during the last year.

PLATE NO. IV



Photo by P. C. Gupta

Fuel extraction on ponies



Photo by P. N. Kohli

Willow plantation, Haran, after defoliation by *Lymantria obfuscata*

II. Minor Forest Produce.

95. The total quantity of kuth received in Baramula depot for sale during the year under report was 2,722 maunds which includes 1,342 maunds extracted departmentally in Kashmir Circle during the year and the balance was received from other divisions, Poonch Jagir and Shikarkhana, Kashmir.

Extraction by departmental agency.

(a) Kuth.

96. The total quantity of kuth sold during the year was 2,502 maunds out of which 2,000 maunds were sold to Messrs. E. D. Sassoon and Co, Ltd., under their agreement and the balance to others under the terms of the agreement of the above firm, viz., 480 maunds to Messrs. Dewan Chand Manoher Lal of Rawalpindi and 22 maunds to others.

97. The total amount realized for the above sale was Rs. 4,01,355/- as compared with Rs. 5,82,206/- in the previous year. The decrease in the revenue of this product is due to the fall in the sale rates under the main agreement from Rs. 287/- per maund to Rs. 150/- per maund.

98. Crude resin was extracted departmentally in Udhampur Division during the year under report and the following figures

(b) Resin.

show the actual position of the work done:-

		Mds.	Srs.	Chs.
Quantity in hand from previous years.		17909	18	14
Collection during Katik and Magher 1990.		5932	19	4
	Total	23841	38	2
Seasonal collections.		31552	22	9
	Total	55394	20	11
Written off	...	278	20	0
Quantity supplied to Jallo Factory.		36476	6	0
	Total	18639	34	11
Balance at the close of the year.				

99. Total revenue realized during the year amounted to Rs. 1,58,041/- which includes the share profit of Rs. 18,616/- of the previous year against which the expenditure amounted to Rs. 75,906/-. This shows a surplus revenue of Rs. 82,135/- on this account.

100. The progress of collection was very satisfactory as 30,000 maunds of resin were collected during the year, as compared with the collection of 28,020 maunds in the last year, by working till the middle of Magher and from 7 blocks more.

101. The expenditure on collection was reduced considerably as except in two blocks it was not allowed to exceed -/12/- per maund against about -/13/- per maund in the previous year. In short, economy was exercised in every detail of this industry and no stone was left unturned to effect saving wherever it was possible. For

this brilliant result credit is due to Lala Kewal Kishen Nanda Divisional Forest Officer, Udhampur Division.

102. The statement appended shows the actual account of crude resin extracted during the Sambat year 1990:-

Actual account of crude resin extracted during 1990.

Particulars.	Mds.	Srs.	Chs.
I. Total collections vide Form No. 18.	29021	5	3
II. <i>Disposal.</i>			
a. Delivery to Jallo	28757	2	0
b. Written off	254	14	0
c. Cost recovered for	2	22	0
d. Balance in hand	7	7	3
III. a. Expenditure incurred on the above collection vide Form No. 48, 7/90 to 6/91. Rs. 84,897/11/6			
b. Add customs duty on 20714 tins valuing Rs. 9295/- at 3/8th of 20 %.		697/ 2/-	
			<hr/>
Total cost		Rs. 85,594/13/6	
IV. Deduct cost of stock in hand:-			
a. New tins 13,165 at 44/14 % 4278/10/-			
b. Old tins 4,015 at -/2/4 each 585/ 8/4			
c. Soldering material 115/ 2/-			
Minus cost incurred on carriage			
Jallo charges of 6,720 unrepaired			
tins at 5/6/7 %.	363/ 8/6		
Balance actual cost of extraction		Rs. 80,252/-/8	

V. Revenue:-	Mds. Srs.	
a. Sale proceeds of 28,757 2 at 4/2		
per maund. 118622/10/-		
b. Price realized for 2 maunds		
and 22 seers. 12/12/		137250/6/-
c. Profit share vide Jallo telegram		
dated 7-9-34 (for 1933-34) 18615/-/-		
VI. Surplus	...	Rs. 56,997/5/4

VII. (a) Average expenditure per maund 2-12-3

on extraction figures,

(b) Net „ „ „ 2-12-8

on delivery figures.

(c) Average profit per maund 1-15-8

on delivery figures.

(d) Average net profit excluding } 2-0-1 per maund.
customs charges }

103. Lac is being grown on Palas in Kathua on Khair in Billawar and on Khair and Ber in Basohli Ranges. The Hari crop was failure in all the Ranges while the Katki crop was a success in Basohli and about 25 maunds of lac were collected. The cultivation of lac is to be set with the following difficulties:-

104. It is reported that the cultivation of lac in the Billawar Division is becoming difficult because of the uncertainty regarding legal position of the areas concerned. A recent claim on the khair areas has resulted in considerable part of this area having been made over to a local zamindar and as regards the Palas areas, the lopping of the trees by villagers prevents

the proper utilization of these trees for lac cultivation. A settlement regarding the legal possession of all the areas in question is, therefore, necessary.

105. In Reasi Division, 13 maunds of Kaimal gum were extracted at a total cost of **Gum.** **Rs. 87/-.** Seventeen maunds including the last years balance were sold to Stationery Depot at -/3/9 per lb. which brought a revenue of **Rs. 329/-.**

106. The total revenue realized from the sale of minor forest products extracted departmentally amounted to **Rs.5,68,400/-** as compared with **Rs.7,18,355/-** during the previous year.

107. The total quantity of Artemisia extracted **Extraction by private agency.** **Artemisia.** during the year by Raja Sir Daya Kishen Kaul under the terms of his lease was 1648 maunds valuing **Rs. 10,493/-.** Owing to the fall in the selling rates of Santonin, the outturn of Artemisia at the request of the contractor was reduced from the stipulated minimum of 100 tons to 60 tons. The price of Artemisia has decreased from £. 40/- to £. 13/- per ton.

108. Leases of other unimportant minor forest products were sold as usual on royalty **Miscellaneous.** and the total amount realized from this source was **Rs. 24,239/-** as compared with **Rs. 22,898/-** during the previous year. Besides **Rs. 1236/-** were realized from the sale of fodder grass and grazing.

109. The total revenue realized from the sale of minor forest products extracted by private agency including price of fodder grass and grazing amounted to Rs. 40,803/- as compared with Rs. 65,341/- in the previous year.

Revenue realized.

110. The following statement shows the revenue realized during the year from the more important minor products mentioned above as compared with the revenue during the previous three years:-

Name of product.	Year.			
	1987—88	1988—89	1989—90	1990—91
Kuth root	576720	575961	582260	401355
Artemisia	22165	84574	39920	10493
Crude resin	138278	136529	113476	158041

III. Outturn of Forest Produce.

111. The following statement shows the out-turn of various classes of forest produce extracted during the year as compared with the figures of the preceding year:-

Class of produce.	1989—90	1990—91
Timber cft. solid	21,366,396	17,570,379
Fuel cft. solid	22,505,742	23,318,677
Total	43,872,138	40,889,056
Bamboo valuing	Rs. 1648	2279
Fodder, grass, leaves valuing	Rs. 444	1236
Minor forest products including Resin and Artemisia valuing	Rs. 170824	197682
Kuth roots in maunds	3742	1342

112. The following statement shows the quantity of timber supplied at concession rates:-

Year.	Circle.	Quantity Cft.	Market Value. Rs.	Prices realized. Rs.
1990-91	Jammu Kashmir	636416	45621	6674
		1177281	78385	13775
	Total	1813697	124006	20449
1989-90	Jammu Kashmir	588014	42254	3204
		1495108	94470	14096
	Total	2083122	136724	17300

113. The following table shows the quantity and value of forest produce removed during the year as free grant by the local villagers, while the figures of firewood under this head are estimated on the number of houses. These figures do not include grass and minor forest produce which are also removed free of charge :-

Year	Circle	Timber		Firewood		Total Value Rs.
		Cft.	Value Rs.	Cft.	Value Rs.	
1990-91	Jammu Kashmir	444888	42515	13211180	206425	2,48,950
		660826	51361	7743517	154926	2,06,287
	Total	1105714	93876	20954697	361351	4,55,237
1989-90	Jammu Kashmir	109056	13436	13211180	206424	2,19,860
		304761	25339	7746609	154926	1,80,265
	Total	413817	38775	20957789	361350	4,00,125

114. Besides the above 1,000 bamboos worth Rs. 86/- were issued free of charge in Billawar Division.

115. The total quantity of timber exported during the year under report from State forests and the Poonch Jagir to British territory amounted to 10,769,805 cft. as per statement No. XIV as compared with 3,348,525 cft. during the previous year.

Export.

IV. Commercial Development & Research.

116. No further report was received during the year from the Inspector of Small Arms,
Wood for rifle parts. Ordnance Department, Government of

India, regarding the suitability or otherwise of Maple and Birdcherry timber as War substitute material. It is believed rapid shooting tests are still going on. For other practical purposes, these two species are good substitutes.

117. Ash timber was in good demand. In fact we could not meet the whole demand of Sialkot manufacturers for Ash inspite of our best efforts. Kashmir Ash trees give grey timber near the centre and are mostly knotty and defective. Much of this is due to lopping. The manufacturers want straight grained white Ash. However 50 Ash trees were felled this year. The white wood was sold in Sialkot while grey one was used in making Bahies for charpoys. Thus every piece right down to 3' x 2" x 2" was utilized. The wood of *Acer pictum* under trial as substitute of white Ash, it is hoped, may come up to the required standard. The experiments with Dhaman wood were not successful. It was too elastic and hence further trials were given up.

Wood for sports works.

118. On account of unprecedented draught this year the crop in Yarkhah nurseries was not so good. The nurseries are more or less open and there is not much shade under which *Digitalis purpurea* thrives best. The undersigned during his tour in Jammu Circle has found this species growing wild under shade of kairu trees where the slope is sufficient. The writer thinks that the department could grow any quantity of *Digitalis* in suitable forests. It is proposed that trial be made in P. B. I. areas where debris has been burnt and other conditions are suitable. The demand for *Digitalis* throughout the world is increasing. *Digitalis lanata* now-a-days is receiving more attention and tests are being made at the School of Tropical Medicine Calcutta under the supervision and direction of Col. Chopra. The material for these tests is being supplied free by the Utilization Division. This species is being grown for the last 6 years when the Divisional Forest Officer, Utilization, happened to notice its qualities in the German papers. The seeds were originally got from Vienna.

119. *Pyrethrum cinararifolium* and *Pyrethrum rosium* were quite a success as far as cultivation is concerned and so were *Althaea officinalis* and *Inula helenium*. All these drugs are now being analysed at the School of Tropical Medicine. Col. Chopra so kindly attended one of the meetings of the Board of Control for Indigenous Drugs and also went round the museum with which he was very pleased. He proposed that we may supply

Other medicinal plants.

him with materials for his book which he is writing on the indigenous drugs found throughout India. He requires collections of the botanical specimens, parts of plants used as drugs and information regarding the local uses of all the plants that grow in the State. This was too big a task to be undertaken with the present staff but the Department will give all the help that it can and as a first instalment of this help *Verbascum thapsus*, *Actaea spicata*, *Lactuca* plants and *Caltha palustris* roots, have been sent.

120. The following exotic drug seeds were tried in the nursery at Baramula:-

1. Soya beans. These beans have recently attracted much notice on account of their vitamin contents. A small sample was procured from Japan and was sown in the nursery. On hearing that the local Agriculture Department had also tried these beans some acclimatized seed was also secured from that department. Both the samples were sown and did quite well. The beans which resulted are under investigation regarding their vitamin contents.

2. Virginia tobacco. On the suggestion of Dr. Stewart, Vice-Principal of Gordon Mission College, Rawalpindi, whose native home is Virginia, a small packet of tobacco was secured from Coimbatore and was sown in the nursery. This did very well as far as vegetation goes. As however, the curing process which is the chief thing was not well-known, it was cured according to the ordinary process followed in the Punjab,

the flavour was not so good. The Divisional Forest Officer, Utilization Division, will, however, raise it again and try other curing methods. It is said that the climatic conditions in Virginia and Kashmir are similar and consequently there is hope for ultimate success.

3. *Lobelia* herb. This was tried with a very little seed obtained from France. The plants came up all right but owing to some unknown reason they died. This will also be taken up again next year.

Besides the above *Iris florentina* and English Bat Willow imported and planted last year are doing quite well.

CHAPTER IX.

FINANCIAL RESULTS.

121. The following statement compares the results **Results of the year.** of the year with those of 1989-90:-

Year.	Receipts.	Expenditure.		Total.	Surplus.
		A	B		
1990-91	3994155 100	512597 12.83	799949 20.00	1312546 32.83	2681609 67.17
1989-90	3802589 100	445919 11.74	772183 20.29	1218102 32.03	2584457 67.97

122. The total value of timber and other produce in hand at the close of the year decreased from Rs. 4,55,724/- to Rs. 3,97,473/-.

123. Outstanding on account of revenue at the end of the year were Rs. 15,95,832/- and Rs. 3103/- as compared with Rs. 21,39,742/- at the end of the last year.

124. As explained in previous years these are not **Revenue outstanding.** true outstandings. The large sums shown as outstandings being due to the fact that the full sale price of the trees sold under standing tree leases is entered in the accounts of Baisakh but only one instalment of the purchase price is actually due from purchasers under their agreements during

the financial year the remainder falling due in the second half of the Sambat year which falls in the succeeding financial year.

125. Advances outstanding against contractors and disburserers at the end of the year amounted to Rs. 49,203/- as compared with Rs. 59,131/- at the close of the last year.

126. During the year under report Keran Division stood first amongst the revenue producing divisions as it gave a revenue of Rs. 7,55,431/- with a surplus of Rs. 6,94,430/- and the Langet Division was second giving revenue of Rs 5,26,642/- with a surplus of Rs. 4,81,885/- while the two Chenab Valley Divisions, Ramban and Kishtwar gave a combined surplus of Rs. 5,18,330/-. The revenue of Sindh Division was Rs. 3,63,133/- with a surplus of Rs. 2,51,432/- whereas the revenue of Bhadarwah, Udhampur, Muzaffarabad, Kamraj and J. V. Divisions was between two and three lacs. Utilization Division gave a revenue of Rs. 1,68,050/- with surplus of Rs. 1,02,458/-, Mirpur and Reasi gave a surplus of only Rs. 32,704/- and Rs. 2816/- respectively while Billawar, Pir Panjal and Jhelum Divisions worked at a loss as is shown in Statement XX.

* Statement No. XVIII.

** , No. XX.

CHAPTER X.

GAME PRESERVATION BRANCH.

127. The Department remained under the supervision of the Chief Conservator of Forests, with **Control.**

Major Anchal Singh as Game Warden and Kanwar Harnam Chand as Assistant Game Warden, throughout the year. The control of fisheries and small game in the Valley and also big game in the Frontier Districts of Astore, Ladakh and Baltistan remained directly under the Game Warden. Control of big game in the valley remained with the respective Divisional Forest Officers of the Kashmir Forest Circle and Kishtwar Division of the Jammu Forest Circle. Fishing at Tangrot remained under the control of the Divisional Forest Officer, Jhelum.

128. During the year under report Government **Changes.** sanctioned extension of the Game Laws and Fisheries Regulation to the Jammu

Province, with special Provisions to meet the local conditions there. Consequent on this extension the Game Warden's jurisdiction was extended over the whole of Jammu and Kashmir. The Divisional Forest Officers of the Jammu Province were entrusted with the work of enforcement of these Laws within their respective divisions, while the Revenue Officials were entrusted with the same work outside the Forests.

129. The appointment of an Assistant Game Warden with the minimum establishment for the Jammu Province with head quarters at Jammu was sanctioned for the coming year.

130. The following special provisions were made in the Game Laws for the Jammu Province:-

1st April to 14th September. *for* Bustard, Brahmani Duck
Close Seasons. Jungle Fowl, Partridges

(Grey & Black), Snow-
 cock (Ram Chukor), Tra-
 gopan, Kalij, Chir, Kok-
 las and Munal Pheasants,
 Green Pigeons, Hill Pig-
 eons and Wood cock.

1st March to 31st July. *for* Sand Grouse.

1st March to 14th September. *for* Chukor.

1st July to 14th September. *for* Quail.

1st April to 14th September. *for* Hares, Wild Fowl, Snipe.

131. The shooting of the following animals and birds is prohibited in the localities mentioned against each :-

Barasingha in Ramban.

Serow in Bhadarwah.

Oorial in Mirpur.

Cheetal.	in the whole of the Jammu Province.
Musk Deer.	
Females of Barking Deer.	
Females of Thar.	
Females of Goral.	
Peacock.	
Heron.	
Nilkanth (Roller).	

132. The shooting and fishing fees were fixed as under :-

Fees.

(a) Fees for shooting licenses (for the whole of the Province less Kishtwar, Ramban and Bhadarwah Tehsils).

Rs. 20/- for Big Game (Shooting and hunting) for season.

(1st January to end of December).

Rs. 5/- for small Game (Shooting Hawking and Snaring for Season).

(b) Fees for Fishing licenses (for the whole of the Province).

(1) *Mahseer Fishing Licenses (whole of the Province)*

Rs. 30/- for Fishing with net for Season (1st January to end of December).

Rs. 30/- for Fishing with rod for Season (as defined above).

Rs. 20/- for Fishing with rod for 10 days.

Rs. 3/- for Fishing with rod for one day.

(2) *Coarse Fishing Licenses (whole of the Province).*

Rs. 20/- for Fishing with net for Season.

(1st January to end of December).

Rs. 10/- for Fishing with rod for Season
(as defined above).

Rs. 5/- for Fishing with rod for 10 days.

Rs. 2/- for Fishing with rod for one day.

133. The above licenses are convertible into the Mahaseer Fishing licenses as in (1) above on payment of difference. Licenses in (a) cover licenses in (b) also.

134. No new sanctuaries for big or small Game other than places sacred to any communities were created.

135. The following areas were declared as Shooting Reserves in which shooting is allowed only on a Special Permit issued on application of a Shooting License holder:-

- (1) All Rakhs under the Revenue Department.
- (2) Shashera Forest, an area near Rajouri (in the Mirpur Forest Division).
- (3) Jhalangar Forest, an area near Reasi (in the Reasi Forest Division).
- (4) Jasrota Forest, an area near Kathua (in the Billawar Forest Division).

136. For purposes of the Fishing licenses all Waters in Jammu have to be notified.

137. Trout Culture being an important concern in Kashmir the necessity of having an expert was urgent. A post of Pisciculturist at Rs. 100/-p. m. was sanctioned for the coming year.

138. To secure the utmost revenue from the local Mahigiri licenses 2 Jamadars' posts were reduced providing one Inspector's post instead. This left the total number of Jamadars as 18 against 20 of last year.

139. Two Forest Guards were transferred from the Forest Budget. This made total number of watchers as 136 against 134 of last year.

140. During the year the shooting and fishing fees were revised by Government, as under:-

Licenses.

<i>A-Shooting.</i>		<i>Fees.</i>	
		<i>Old.</i>	<i>New.</i>
1. Big Game License No. 1.		Rs. 125/-	175/-
2. Big Game License No. 2 (for Black-bear, Pig, Leopard, Fox, Otter, Stone-martin and other Vermin).		Rs. 40/-	55/-
3. Big Game License No. 3.		Rs. 75/-	105/-
4. Big Game License No. 4 (local for Baltistan, Ladakh and Astore District).		Rs. 20/-	50/-
5. Small Game License No. 5-A.	Rs.	50/-	70/-
6. Small Game License No. 5-B. (for 2 months).	Rs.	30/-	42/-
7. Small Game License No. 5-C.	Rs.	50/-	70/-
8. Special License No. 6.	Rs.	50/-	70/-
9. Trapping License No. 7.	Rs.	30/-	40/-

(45)

A new Small Game License No. 5-D for 15 days at Rs. 15/- was also sanctioned.

B- *Trout Fishing.*

(a) For Season	Rs. 150/-	200/-
(b) For one week	Rs. 25/-	30/-
(c) For one day	Rs. 5/-	7/-

141. Shooting and Fishing licenses issued and total revenue obtained therefor remained as **Shooting and Fishing licenses issued and revenue obtained.** under:-

A- *Shooting.*

<i>Kind of license.</i>	<i>Number issued.</i>	<i>Revenue obtained.</i>
No. 1. Big Game license.	42 @ 175	
	5 @ 20 Exc:	Rs. 7,950/-
No. 2. -do- -do-	37 @ 55 + 1	Rs. 2,036/-
	duplicate	
No. 3. -do- -do-	1 @ 75 } 1 @ 105 }	Rs. 180/-
No. 4. -do- -do-	10 @ 20 } 1 @ 50 }	Rs. 250/-
No. 5-A Small Game license	5 @ 50	
	15 @ 20 (Exch)	
	11 @ 70	Rs. 1,320/-
No. 5-B Small Game license	48 @ 30 + 1	
	duplicate }	Rs. 2365/-
No. 5-C -do- -do-	22 @ 42	
	14 @ 50 + 1 (duplicate)	
	15 @ 70	Rs. 1751/-
No. 5-D -do- -do-	28 @ 15	Rs. 420/-
No. 6. Game license.	2 @ 70	Rs. 140/-

<i>Kind of License.</i>	<i>Number issued.</i>	<i>Revenue obtained.</i>
No. 7. Game license	12 @ 30 + 1 (duplicate) 10 @ 40 + 1 (duplicate)	Rs. 762/-
Big Game licenses (Jammu Province)	3 @ 20.	Rs. 60/-
Small Game licenses (-do-)	14 @ 5.	Rs. 70/-
		<hr/>
	Total	Rs. 17,304/-
1. Trout licenses	366	Rs. 17,245/-
2. <i>Country Fishing Licenses.</i>		
(a) Protected Waters	44 @ 4 118 @ 15 342 @ 20 + 3 @ 1 (duplicate) 2 @ 5 (Exchanged)	Rs. 176/- Rs. 1,770/- Rs. 6,840/- 3/- 10/-
(b) Reserved Waters	149 @ 10 13 @ 20 116 @ 30 17 (Exchanged)	Rs. 1,490/- Rs. 260/- Rs. 3,480/- Rs. 166/-
Licenses sold through Sopore Niabat.		Rs. 2,720/-
Licenses sold through Anantnag Tehsil.		Rs. 1,120/-
Licenses sold through Kotli Tehsil.		Rs. 33/-
Licenses sold through Tangrot		Rs. 599/-
	<hr/>	
	Total	Rs. 18,667/-
	Grand Total	Rs. 35,912/-

142. Details of Receipts and Expenditure are given
Receipts and Expenditure. below. Figures for the previous year

are also given for comparison.

(a) Receipts.

	1989-90.			1990-91.			Difference.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1. Game Licenses.	16,099	0	0	17,304	0	0	+ 1,205	0	0
2. Fishing Licenses.	20,557	0	0	18,667	0	0	- 1,890	0	0
3. Trout Licenses.	14,665	0	0	17,245	0	0	+ 2,580	0	0
4. Fines.	391	0	0	362	8	0	- 28	8	0
5. Sale of Trout, Yearlings & Ova from Hatcheries.	1,839	4	6	3,452	3	6	+ 1,612	15	0
6. Miscellaneous.	778	4	3	453	0	0	- 325	4	3
7. Sale of Kashmiri Fish.	...			135	13	6	+ 135	13	6
Total	54,329	8	9	57,619	9	0	+ 3,290	0	3

(b) Expenditure.

	1989-90.			1990-91.			Difference.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1. Salary of Gazetted Staff.	7,560	0	0	7,560	0	0	—		
2. Pay of Establish- ment.	31,606	15	0	30,728	2	0	- 878	13	0
3. Travelling Allowance.	4,250	0	0	2,750	0	0	- 1500	0	0
4. Contingencies.	4,700	0	0	6,167	5	0	+ 1467	5	0
5. Postage & Telegrams.	629	13	0	722	0	0	+ 92	3	0
Total	48,746	12	0	47,927	7	0	- 819	5	0

Net result of years working is :-

	1989-90.	1990-91.
(a) Total Income ...	Rs. 54,329/ 8/ 9	57,619/ 9/-
(b) Total Expenditure ...	Rs. 48,746/12/-	47,927/ 7/ 6
Surplus ...	Rs + 5,582/12/ 9	+ 9,692/ 2/-

143. There is thus a net profit of Rs. 9,692/2/- on the years working against the net profit of Rs. 5,582/12/9 of the last year.

144. All Sportsmen inspite of clear instructions did not furnish complete returns of the big game killed by them this year again. However from the information received the following details of big game shot during the year under report have been collected (Figures for the previous year are also given for comparison):-

Animal.	No. Shot 1989-90.	No. Shot 1990-91.	Largest head recorded.	Locality where shot.
1. Markhor	9	12	51 $\frac{3}{4}$ "	Rondu
2. Ibex	16	38	50"	"
3. Ovis Ammon	10	13	45 $\frac{1}{2}$ "	"
4. Tibetan Antelope	6	8	—	"
5. Sharpu	21	19	33"	"
6. Tibetan Gazelle	1	2	—	"
7. Serow	2	—	—	"
8. Burhal	19	18	26 $\frac{3}{4}$ "	"
9. Barasingh	23	21	49"	Lidder Valley
10. Thar	13	9	6"	"
11. Gural	11	14	—	"
12. Leopards	12	9	—	"
13. Wolves	106	33	—	"
14. Red Bear	20	12	—	"
15. Black Bear	52	21	—	"

145. The season was not so good for Duck and other fowl in the beginning owing to **Small Game.** the long draught and scarcity of water in the Jhils. The results on Pampur and Mirgund were not so good as last year. The season however afforded very good Chukor shooting compared with the past 4 or 5 seasons.

146. The largest Trout reported killed in various Waters were:-

Trout Fishing Results.

Desu	3 lbs.
Bringhi Upper	5 lbs.
Bringhi Middle	6½ lbs.
Bringhi Lower	6½ lbs.
Bringhi Lowest	3 lbs 14 ozs.
Nowbug Upper	4 lbs.
Nowbug Lower	3 , ,
Kokarnag	8 , ,
Pahalgam-Aru	5 , ,
Pahalgam-Shishnag	5¾ , ,
Sind Sumbal	3½ , ,
Sind Upper	3¾ , ,
Sind Middle	5 , ,
Sind Lower	7 , ,
Sind Lowest	4 , ,
Wangat	4½ , ,
Madmatti	8 , ,
Burdwan	4¾ , ,
Achhabal	10 , ,
Ningle (Mahseer).	38 , ,

147. Panzat Trout Stream which had been stocked last year was transferred to the Shikarkhana Department.

148. Erin Stream on adverse reports from Sportsmen was closed for rest and it remained so during the year.

149. All streams remained well stocked. The following Streams however were further stocked with ova and yearlings as noted against each:-

1. Dara with 500 yearlings and 5,00,000 ova from Harwan hatchery.

2. Erin with 1500 yearlings and 1,00,000 ova, from Harwan hatchery.

3. Panzat with 50,000 ova from Harwan hatchery and 1,000 yearlings from Achhabal hatchery.

4. Telwani with 50,000 ova from Harwan hatchery and 1,000 yearlings from Achhabal hatchery,

5. Achhabal with 2,000 yearlings and 500 (2 year olds) from Achhabal hatchery.

6. Pahalgam-Shishnag with 2,000 yearlings from Achhabal hatchery.

7. Kokarnag with 500 two year-olds.

150. A peculiar disease broke out in the Harwan Hatchery in the month of April, which attacked the Rainbow Trout alone and killed about 40 of them in rapid succession in a few

days. This disease remained un-identified inspite of every effort. Specimens of dead and dying fish were sent to an expert at Calcutta but to no advantage. Measures were taken to improve the hygeinic conditions of tanks by cleaning and disinfecting them. Change of pens and of food were also tried, but no appreciable results were obtained. The disease then dis-appeared automatically and rather suddenly. It is believed to have been due to the exceptional heat of 1934.

151. During the year under report 19 cases of infringement of Game Laws and 52 cases of infringement of Fisheries Regulation were instituted in the Courts of Game Warden and the Assistant Game Warden against 26 of infringement of Game Laws and 71 cases of Fisheries Regulation during the last year. Seven cases of infringement of Game Laws and 26 cases of infringement of Fisheries Regulation instituted last year also were tried during the year. Decision was given in 22 cases of infringement of Game Laws and 64 cases of infringement of Fisheries Regulation during the year. Punishment was given in 44 cases and Rs. 362/8/- realised as fines, out of which Rs. 51/- were paid as rewards and balance credited into the Treasury.

Offences reported and disposed of.

152. The Game Warden and the Divisional Forest Officers, of the Kashmir Forest Circle were invested with first class magisterial powers for trial of cases under the Game Laws.

General.

Divisional Forest Officers of the Jammu Forest Circle were also invested with same powers consequent on the extension of the Game Laws and Fisheries Regulation to that Province.

153. The year was a normal one and the progress has been steady in all directions.

Conclusion. A net surplus of Rs. 9,692/- has been obtained during the year against Rs. 5,582/- during the last year.

XI. CHAPTER. MISCELLANEOUS.

154. Mr. B. O. Coventry, I. F. S., who was Conservator of Forests, Jammu and Kashmir, for the years 1972—79 has presented to the Library of the Chief Conservator of Forests the greater part of the back numbers of the Indian Forester, Volumes 1 to XLVIII, as well as many other scientific books dealing with Forestry and allied subjects. The gift is an extremely valuable one which has earned the grateful thanks of the Forest Department.

155. Mr. S. S. Bhagat, Dy. Conservator of Forests, drafted a catalogue for the Kashmir State Exhibition which was published during the year.

156. Achhabal Waylu road was transferred from the Revenue to the Forest Department.

157. The political atmosphere remained calm except the agitation of Astories against the Forest Department in which connection the Chief Conservator of Forests had to go personally to Gurez to make the agitators understand the situation. The Wazir Wazarat with the leaders of the people met the Chief Conservator of Forests at Gurez and the latter explained to all concerned the system of Village Forest Committees which would control the timber and firewood of the area. They then expressed their sense of gratitude to the Chief Conservator of Forests for his being instrumental in securing them their necessities of life and the monetary gain through working minor forest

products in the Astore area. A notification specifying the concessions granted to these people was issued by the Government soon after and the Forest Ranger was sent to Astore with his establishment.

158. The timber market in general is slowly recovering from the effect of the world-wide slump.

159. The Divisional Forest Officer, Utilization Division, has disposed of all the stock of minor forest products this year. The consumption of these products in India as well as in Europe is increasing.

160. The collection of seeds and plants for the Royal Parks in London was made as usual.

161. The Board of Control for Indigenous Drugs held some sittings at Baramula and formulated various proposals. The most important was regarding the appointment of Chemist and the establishment of a chemical laboratory at Baramula for analysing and standardizing the drugs which are produced in Kashmir.

162. The annual demand of Artemisia by the lessee has been decreased from 100 to 60 tons owing to the fall in the price of Santonin.

163. The prices of food-grains were slightly better than those of the previous year.

164. Relations with the Revenue and other Departments remained absolutely cordial.

P. H. CLUTTERBUCK.
Chief Conservator of Forests.

APPENDICES.

STATEMENT No. XVII.

*Summary of Revenue & Expenditure
for the Fasli year 1990—91.*

Budget Heads.	Amount. Rs.	Remarks.
REVENUE.		
I. Timber or other produce removed from Forests by State Agency:-	.	
(a) Timber	63153	
(b) Firewood & Charcoal	75544	
(c) Bamboos	194	
(d) Kuth	376207	
(e) Grass and other Minor Produce	192193	
		707291
II. Timber and other produce removed from the Forests by Purchasers:-		
(a) Timber	3100858	
(b) Firewood & Charcoal	25468	
(c) Bamboos	2306	
(d) Grazing and Fodder grass	2067	
(e) Other Minor Produce	38736	
		3169435

STATEMENT No. XVII—(Contd.)

*Summary of Revenue & Expenditure
for the Fasli year 1990—91.*

Budget Heads.	Amount. Rs.	Remarks.
REVENUE <i>Contd.</i>		
III. Confiscated Drift and waif wood	38334	
V. Miscellaneous:-		
(a) Fines and forfeiture	6939	
(b) Refunds	3240	
(c) Other sources	68916	
Total	79095	
Total Revenue	3994155	
EXPENDITURE		
A.— <i>Conservancy & Works.</i>		
I. Timber and other produce re- moved from forests by State Agency:-		
(a) Timber	79376	
(b) Firewood	68093	
(c) Bamboos	68	
(d) Kuth roots	32925	
(e) Grass and other Minor Produce	105342	
Total	285804	

STATEMENT No. XVII—(Contd.)

*Summary of Revenue & Expenditure
for the Fasli year 1990—91.*

Budget Heads.	Amount. Rs.	Remarks.
EXPENDITURE Contd.		
II. Timber and other produce removed from forests by Purchasers ...	8917	
III. Confiscated Drift and Waif wood ...	6105	
V. Rent for leased forests and payment to share-holders in forests managed by the State.	786	
VI. Live Stock, Stores, tools and plant :- ... (a) Purchase of Cattle ... (b) Feed and keep of Cattle ... (c) Stores, tools and plant ...	... 120 4494 <hr/> 4614	
VII. Communications and buildings :- (a) Roads and Bridges ... (b) Buildings ... (c) Other works ...	47132 34055 15832 <hr/> 97019	

STATEMENT No. XVII—(Contd.)

*Summary of Revenue & Expenditure
for the Fasli year 1990—91.*

Budget Heads.	Amount. Rs.	Remarks.
EXPENDITURE Contd.		
VIII. Demarcation, Improvement and extention of forests :-		
(a) Demarcation ...	2050	
(b) Cost of Settlement Compensation for land and rights ...	84	
(c) Surveys ...	38	
(d) Working Plans ...	25464	
(e) Sowing and Planting ...	24956	
(f) Protection from fire ...	1829	
(g) Other works ...	26800	
Total ...	81221	
IX. Miscellaneous :-		
(a) Refunds ...	14795	
(b) Law charges ...	1303	
(c) Other works ...	12033	
Total ...	28131	
Total 'A' Conservancy & Works	512597	

STATEMENT No. XVII—(Contd.)

*Summary of Revenue & Expenditure
for the Fasli year 1990—91.*

Budget Heads.	Amount. Rs.	Remarks.
'B'—ESTABLISHMENT.		
I. Salary:-		
(a) Conservators ...	44142	
(b) Superior Officers ...	135264	
(c) Subordinate Forest and Depot Establishment ...	345523	
(d) Office Establishment ...	132165	
(e) Deputation and special allowance ...	13069	
Total ...	670163	
II. Travelling allowance:-		
(a) Conservators ...	5398	
(b) Superior Officers ...	22994	
(c) Subordinate Forest and Depot Establishment ...	43658	
(d) Office Establishment ...	13955	
Total ...	86005	

STATEMENT No. XVII—(Contd.)

*Summary of Revenue & Expenditure
for the Fasli year 1990—91.*

Budget Heads.	Amount. Rs.	Remarks.
'B' ESTABLISHMENT Contd.		
III. Contingencies :-		
(a) Stationery ...	2929	
(b) Carriage of tents and record	15317	
(c) Rent, rates and taxes ...	2913	
(d) Official Postage	9842	
(e) Sundries ...	12780	
 Total ...	43781	
 Total 'B' Establishment ...	799949	
 Add total 'A' Conservancy	512597	
 Grand Total 'A' and 'B' ...	1312546	

STATEMENT
Financial results of the

Division.	Timber and other Produce removed from the Forests by State Agency.		Other revenue.	
	Receipts.	Charges.	Receipts.	Charges.
	Rs.	Rs.	Rs.	Rs.
Direction Division	...	...	1,575	...
Working Plan Control				
Division	...	...	136	...
Research Division	...	...	19	...
Kishtwar	589	6,056	2,53,137	346
Ramban	242	83	3,81,641	639
Bhadarwah	7	...	2,03,733	323
Udhampur	1,58,064	75,914	96,123	1,273
Riasi	1,341	188	49,970	4,438
Mirpur		15	77,095	386
Billawar	398	296	9,399	148
Jammu Working Plan	...	..	...	13
Circle Office Jammu	...	6	27	10
Kashmir Circle Office	...	...	3	1,139
Kashmir Division	58,769	22,167	63,952	6,780
Sindh Division	2,79,030	47,211	84,103	6,308
Keran & Keran W. P.	3,117	988	7,52,314	12,296
Muzaffarabad	222	917	2,30,480	11,262
Kamraj	2,103	8,126	2,69,825	8,559
Jhelum Valley & W.P.	24,760	7,771	2,14,788	6,447
Pir Panjal	14,020	47,010	43,741	7,278
Langet	180	551	5,26,462	5,976
Utilization	1,64,454	47,791	3,598	1,318
Jhelum	...	20,717	24,673	13,577
Kamraj W. P.	...	...	33	120
Muzaffarabad W.P.	...	...	31	51
 Total	7,07,296	2,85,807	32,86,859	88,687

No. XX.

Fasli year 1990-91.

Formation & Protection & improvement of Forests.	Establish- ment.	Total.		Variation.	
		Charges.	Receipts.	Charges.	Surplus.
		Rs.	Rs.	Rs.	Rs.
376	39,159	1,575	39,535	...	37,960
2,615	6,635	136	9,250	...	9,114
1,081	15,256	19	16,337	...	16,318
7,205	45,238	2,53,727	58,845	1,94,882	...
9,870	47,848	3,81,883	58,440	3,23,443	...
22,105	32,595	2,03,740	55,023	1,48,717	...
12,046	53,713	2,54,187	1,42,946	1,11,241	...
3,340	40,529	51,311	48,495	2,816	...
7,741	36,249	77,095	44,391	32,704	23,419
3,749	29,023	9,797	33,216	...	9,332
734	8,585	...	9,332	...	20,262
152	20,121	27	20,289	...	27,442
139	26,167	3	27,445	...	...
3,120	45,190	1,22,721	77,257	45,464	...
10,061	48,121	3,63,133	1,11,701	2,51,432	...
7,431	40,286	7,55,431	61,001	6,94,430	...
6,317	46,404	2,30,702	64,900	1,65,802	...
5,462	43,322	2,71,928	65,469	2,06,459	...
9,807	41,828	2,39,548	65,853	1,73,695	...
8,074	34,381	57,761	96,743	...	38,982
4,817	33,413	5,26,642	44,757	4,81,885	...
694	15,791	1,68,052	65,594	1,02,458	...
725	24,584	24,673	59,603	...	34,930
5,039	10,972	33	16,131	...	16,098
5,402	14,540	31	19,993	...	19,962
				29,35,428	2,53,819
1,38,102	7,99,950	39,94,155	13,12,546	26,81,609	...



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